Dr. Charles Aling

*What’s in the Numbers?: Stretching 18th Dynasty Chronology and its Biblical Implications*

Given new research on the end and the beginning of Egypt’s 18th Dynasty, can we stretch the kings in the middle of the dynasty to fit? If so, how does this impact biblical Chronology? New evidence on all this will be considered.

Dr. Thom Black

*“Was it for Me that You Fasted?”: A 21st Century Application of an Ancient Spiritual Practice*

What is the value to NWC students of fasting from social media? The quality of communication in our culture is often characterized by sound-bites (rather than content) and little or no reflection (rather than deeper meaning). Is it possible for us to help our students to grow in the direction of being fully present in one context (rather than “multi-tasking”) that is real (rather than “virtual”) and in which relationships are deeply personal (beyond being “liked” and “friended”)? This session will present a summary of recent writings on the impact of social media on the development of “emerging adults” and the results that some students have achieved by practicing a “technology fast.”

Ardel B. Caneday, PhD

*Already Reigning in Life through One Man: Recovery of Adam’s Abandoned Dominion*

“Save the world!”, once may have been thought to be the Christian mission, is now environmentalism’s mantra for sustainability with its saving objective, message, and gospel altogether different from that of Christ and his apostles. It is a message rooted a belief system that challenges the Christian gospel.

The apostle Paul writes, “For if by the trespass of the one man, death reigned through that one man, how much more will those who receive God’s abundant provision of grace and of the gift of righteousness reign in life through the one man, Jesus Christ” (Romans 5:17). Does Paul’s “reign in life” endorse and support the Green Gospel that many Christians now embrace and find within *The Green Bible*?

This presentation will argue that the apostle means that all who receive God’s abundant grace and gift of righteousness even now reign in life through Jesus Christ, but that to reign in life in the present world is to gain dominion over sin not dominion over cursed creation. Dominion over the cursed world will come in due course, but not yet, not until believers receive redemption of their bodies.
Paul J. Chara, Jr. & William J. Eppright
*The Item-Number Distortion Effect in Rank Order Testing: An Example Using the Clifton StrengthsFinder Inventory*

A possible distortion effect in tests that use (a) forced-choice ipsative scaling and (b) different numbers of items to determine categorical representation was investigated. It was proposed that the greater the number of items used to determine representation in a category, the lower the likelihood that category will be selected. The Clifton StrengthsFinder questionnaire, in which responses to 177 items are used to determine which of 34 talent themes are respondents’ top five “Signature Themes,” was examined to ascertain whether or not the aforementioned distortion effect affected test results. Analysis of 1,198,645 completions of the questionnaire provided confirmatory evidence for the distortion effect. These findings call into question the trustworthiness of the Clifton StrengthsFinder questionnaire and any test that uses a similar design format.

Elizabeth Compton
*Dispositional Aesthetic Realism*

As often as people disagree over aesthetic matters, we might wonder if "there's no disputing taste," or whether "beauty is only in the eye of the beholder." Aesthetic realists, however, argue that things have aesthetic properties independently of our opinions and responses to them. Using the example of a pair of Japanese screens, I develop a theory of aesthetic properties where they are explained as dispositions to cause aesthetic experiences for qualified perceivers under appropriate conditions. This accounts for a great deal of aesthetic disagreement, and helps keep the door open for aesthetic realism.

Daniel Crane
*Do Buffers Really Resist Changes in pH?*

According to many general chemistry textbooks, a buffer is a solution which resists changes in pH upon addition of an acid or a base. In addition, some texts state that a buffer consists of an acid-base conjugate pair, and many texts specify that the pH resistance is possible only for small amounts of added acid or base. The important characteristic of a buffer solution, according to the approximately twenty texts surveyed, is the solution’s ability to resist changes in pH. Is this really true?

Justin Daeley
*On Divine Libertarianism*

In this paper I will analyze some of the most important and influential arguments for the claim that God’s freedom should be interpreted as divine libertarian freedom. After first summarizing the metaphysics of contemporary libertarianism applied to God, I will then evaluate the strength of the arguments for divine libertarian freedom and develop some counterarguments. Finally, I will argue that a closer look at libertarianism applied to God entails the denial that God is a perfect being.
David E. Fenrick

*A Christ-Centered Model for the Christian College in Global Education Initiatives*

The stated mission of Northwestern College is that it “[…] exists to provide Christ-centered higher education equipping students to grow intellectually and spiritually, to serve effectively in their professions, and to give God-honoring leadership in the home, church, community, and world.” The biblical vision for fulfilling that mission is that “because of God's compelling love, we will teach wisdom and understanding to reach all nations for Christ (2 Corinthians 5:14, Proverbs 1:7, Matthew 28:19). The commitment to that mission and vision in higher education is reflected in our strategic priorities and long-term strategic plan.

In striving to be a Christ-centered institute of higher education, how do we understand the unique role of the Christian university in international engagement and education? What is “Christ-centered” about our global initiatives and being engaged in the world? And do we find in scripture a model for that international engagement?

This paper will address the present need for the Christian university to be engaged in the world, while at the same time exploring a paradigm for engagement that reflects the character of God and is truly “Christ-centered.” A Christ-centered paradigm for global, intercultural education must be rooted in the incarnation, that is, God “enfleshed” in the person of Jesus. The incarnation is our pedagogical, theological, and missiological foundation for international engagement and intercultural education.

Dale Gentry

*Nest success and habitat selection of cavity nesting birds in suburban deciduous forests of East-central Minnesota*

Primary cavity excavators (woodpeckers and allies) play an essential role in forest ecosystems by providing nest sites for many animals that cannot excavate their own cavities. Therefore, forest management plans that aim for maximizing biodiversity should seek to maximize habitat quality for cavity excavators. However, most studies of habitat preference and nest success by cavity nesters are from western conifer forests that do not apply to deciduous forests or the influences of urbanization and suburban forest management. We studied nest success and habitat selection by cavity nesting birds on the Northwestern College Campus in the summer of 2012. We found 22 nests of seven different species. Nest success was higher in the managed forest than in the unmanaged forest although abundance of nesting snags was lower in the managed forest. We recommend forest managers seeking to maximize wildlife diversity select for trees that are easily excavated or that are likely to contain natural cavities.
**Dale Hutchcraft**

*What follower behavior says about a leader?*

In the seminal research on followership, Kelley (1992) noted that leaders contribute no more than 20% to the success of an organization, while followers are critical to the remaining 80%. The importance of followers and the reciprocal relationship between leaders and followers is brought into even clearer focus. Rost’s (1993) definition of leadership is—"an influence relationship among leaders and followers who intend real changes that reflect shared purpose" (p. 102). Healthy organizations are made up of healthy leaders as well as healthy followers (Clausen, 2002; Shawchuck, 1999). Burns‘ (2003) paradox recognized—"the dependence of leaders on followers‘ perceptions and expectations and potentials" (p. 171). At the core of Burns‘ (2003) paradox is the idea that—"followers also have the potential for making significant contributions to successful leadership" (Hollander, 1992, p. 44). These contributions are released when leaders realize that—"leaders are called upon to be responsive as followers" (Hollander, p. 45). For transformational leadership to be effectively exercised, a leader needs to be able to diagnose the needs and wants of followers. Therefore, at the core of effective leadership there needs to be an individual with strong motivation to lead that—"initiates an action relevant to those of such want" (Burns, 2003, p. 172).

Patterson (2003) and Winston (2005) further articulated and clarified in independent works the servant leader–follower interaction, showing—"the effect of service (leaders and followers respectively) on the others‘ agapao love (moral love or friendship/respect valuation for the other)" (Winston, 2005, p. 1). Winston (2003c) wrote that much can be concluded about the nature of an individual’s leadership by way of the reaction of the followers. Winston (2003c) set forth eight basic sets of leader–follower behaviors that are on a—"Continuum of Leader-Follower Roles starting with the despotic ruler and going through to servant leader. Leaders need to be aware that leadership involves interaction with followers. Part of that interaction involves those in leadership taking cues from their followers. This leads to the question what do the cues of follower behavior reveal to a leader about their leadership?"

**Don F. Johnson, Ph.D. & Students**

*Spiritual Doubt: A Phenomenological Investigation*

Fifteen undergraduate students at Northwestern College participated in a qualitative inquiry into the experience of spiritual doubt. Phenomenological methodology is a descriptive inquiry of the experience of phenomena. Participants responded to open-ended questions addressing the nature of their spiritual doubt, the impact doubt had upon their behavior, and their attempts to resolve their doubt. This presentation will give a brief explanation of the phenomenological method and summarize participant descriptions of their experience of spiritual doubt. Implications for spiritual formation will be addressed.
**Joanna Klein, Ph.D.**

*Cellulophaga lytica: the “Microbial Mascot” of Northwestern College*

Northwestern college has begun the task of interpreting the genome (complete DNA sequence) of the marine bacterium *Cellulophaga lytica* in collaboration with the Joint Genome Institute of the US Department of Energy. Students taking microbiology and genetics receive training and hands on experience in bioinformatics and use a suite of computer programs to further understand *C. lytica* genes and their functions. In the fall of 2012, genetics students studied 13 genes predicted to be involved in the ability of the bacterium to glide across surfaces. Their work suggests that *C. lytica* gliding is similar to that in the related bacterium *Flavobacterium johnsoniae*. Beyond bioinformatics, research students have done laboratory experiments to investigate the ability of *C. lytica* to degrade cellulose – the main component of plant cell walls. Cellulose degrading bacteria may help in the development of new technologies to produce ethanol from plant material, with the goal of reducing reliance on fossil fuels and addressing current limitations of producing ethanol from corn. To this end, we have recently cloned a cellulase gene from *C. lytica* and expressed it in *E. coli*.

**Matthew Miller**

*The American YMCA and the St. Sergius Theological Academy in Paris, 1925-1940*

During the early 1920s several Russian Orthodox clergy in western Europe and the leaders of the Young Men’s Christian Association decided that it was necessary to organize a training institute for future priests. The new instructors established a distinguished institution which trained many to serve the émigré community; they also published pathbreaking intellectual work in the fields of theology, philosophy, and history. This paper examines the development of the St. Sergius Theological Academy in Paris from its establishment in 1925 until 1940. These years included the worst days of Joseph Stalin’s persecution of the church inside the Soviet Union. The YMCA contributed to the development of St. Sergius and each of the faculty members by making significant financial contributions, encouraging a broad range of opinions on theological and ministry issues, setting an example of practical service to contemporary parishioners, and developing a strong network of global relationships. The Y’s support of this institution, along with its assistance of the Russian Student Christian Movement and the YMCA Press, made a substantial contribution to the enrichment and spread of Orthodox Christianity.

**Jessica Nelson Moore, MLIS**

*Using LibQUAL+® to Assess Library Service Quality*

In order to assess library service quality, the Berntsen Library administered the LibQUAL+® survey to NWC’s students and faculty in 2008 and 2012. The LibQUAL+® survey measures library patrons’ perceived and desired levels of service for 22 dimensions of service quality. The survey results, including the optional comments added by survey participants, have been beneficial in the assessment and improvement of library services. Come to this session to learn about what NWC students and faculty value most about their library, what they desire most from their library, and how the Berntsen Library has made changes and improvements in response to the LibQUAL+® results.
Dr. Melissa Baartman Mork

*Instructional Humor: Strategies to enhance learning in the college classroom*

The use of humor is advocated by many as an example of good practice in pedagogy and andragogy. Positive effects of classroom humor include student stress reduction, lowered anxiety, and increased enthusiasm toward the topic. Students report greater social rapport with their instructors who use humor, and students show increased motivation and learning as a result of the use of instructional humor. Indeed, humor has been called “an educator’s most powerful resource” (Banas, Dunbar, Rodriguez, & Liu, 2011). This session will provide a summary of the definitions, functions, and main theories of humor in higher education settings and will explore strategies for using humor for effective academic instructional purposes.


*Lean in Higher Education*

The development of “lean” processes and “lean” techniques in manufacturing was spearheaded by the Toyota Motor Company. Packaged into the *Toyota Production System (TPS)*, these advancements in streamlining the manufacturing process enable Toyota to become the most efficient manufacturing company in the world. TPS was adopted by U.S. manufacturing businesses. Soon service companies, including McDonalds, Starbucks, and Caribou Coffee, adopted this methodology. Hospitals such as Minneapolis Children’s Hospital and Hennepin County Medical Center (HCMC), facing extreme price pressure, have their own lean systems, seeking to standardize and improve support functions and actual medical procedures.

The application of “lean” to higher education is also underway, although at a slower pace. Colleges and universities, facing the same price pressures as hospitals, must achieve improvement in efficiency for institutional survival. (a) The easiest area to apply lean is in support services (maintenance, janitorial). (b) Many colleges are now applying “lean” to direct student support processes (recruitment and registration). (c) Few have ventured to apply “lean” to the classroom.

Presentation will include: (1) the foundation and history of “lean,” (2) the application of “lean” to hospitals, (3) “lean” advances in higher education support services, and (4) early exploration of applying “lean” to the classroom.

Dr. Walter Schultz and Dr. Lisanne Winslow

*Occasional Causation and Dispositions*

In his book, *Occasionalism: Causation Among the Cartesians* (Oxford 2011), Steven Nadler reports that “Occasionalism represents one species or variety of occasional causation, namely, that species in which the proximate and efficient cause whose operation (through efficient causation) is elicited by the occasional cause is God.” *Occasional causation* is a relation such that a substance (event or state of affairs) $A$ induces or elicits—but not efficiently causes—substance (event or state of affairs) $B$ to efficiently cause $e$. Nadler then asks, “What, then, is this occasioning relation? There is no clear answer to this question.” We propose, first, that the occasioning relation described and schematized by Nadler is the relation constituting a dispositional property, where such properties are best analyzed theologically in terms of God’s creative action.
Dr. Boyd Seevers & Dr. Joanna Klein
*Genetics and the Bible: The Curious Case of the Left-Handed Benjamites*

All of the left-handers mentioned in the Bible are from the tribe of Benjamin. Might modern genetics shed light on this interesting fact? How would their left-handedness have affected their military ability?
Boyd Seevers, Professor of Old Testament, and Joanna Klein, Associate Professor of Biology, work cross-discipline to discuss this biblical curiosity and its implications from each of their fields. Boyd Seevers explains the biblical examples and military implications of left-handed Benjamite warriors. Joanna Klein lays out the scientific research that suggests handedness is a complex result of genetics and conditioning.

James Smith
*The World Is Not Flat, and Why That Fact Matters.*

In his 2005 book *The World Is Flat*, Thomas Friedman wrote a strong, convincing argument for the shift in economics from local to global. He cited ten factors that have moved us to globalization including outsourcing, offshoring, supply chaining, insourcing, and mobile devices. However, economists have researched international trade and concluded that globalization is far from a reality.
Pankaj Ghemawat, an economist, professor for 25 years at Harvard Business School, and presently Professor of Global Strategy at IESE in Barcelona, Spain, challenges Friedman’s globalization position by providing real economic data on the issues. Generally speaking, the world is far from being flat. The true concern over Friedman’s view of globalization is that, according to Ghemawat, overstating the case for globalization tends to harm those countries that greatly need to join the international economic community by giving the misimpression that globalization has already taken place.
Dr. Walter Schultz and Dr. Lisanne Winslow present their interdisciplinary research collaboration investigating a dynamic interaction between philosophy, theology and biology. The central aim of our work is to arrive at a biblically grounded ontology of a philosophical account of the basic concepts in science in general, and in biological mechanisms in particular. Our view, called Divine Compositionalism, begins with a biblically informed Christocentric starting point, stating that all things were created ex nihilo by and for Christ (1Cor 8:6; Col 1:15-17). This model further assumes that God is sustaining the creation moment by moment, upholding all things by the word of his power (Heb 1:3). From these basic presuppositions, our research then attempts to provide a scientifically accurate account of biological mechanisms as the manifestation of God’s acting in the natural world. The mechanism of protein synthesis is the current biological model of emphasis and investigation.

Toward this end, we have developed, and are currently teaching, a 2-credit interdisciplinary course in Philosophy and Biology. The course, Metaphysics PHI 3035 is entitled, An Interdisciplinary Quest for a Christian Understanding of Mechanisms in Science. This exciting and somewhat risky course invites students into our research discussions and is designed to have them play a vital role in the formulation of our ideas. This course is exciting on several levels: it exposes students to the dynamic intellectual beauty of Christian scholarship, it integrates two exciting disciplines in a general education course, and provides a novel pedagogical strategy for integrating two diverse disciplines using classroom techniques as well as Moodle discussion forums.

Dr. Michael Wise
Confession: A Trial Cut

My paper will be a selection from the first chapter of a book I am currently writing with a psychologist friend, David Dupere, Psy.D. He has a thriving practice in Florida and has had for some twenty years. We are collaborating on the topic of confession, as seen both theologically and psychologically. Our intention is to explain what it is and how to do it. It is not what people usually think; confession is much more than telling God my sins and asking for forgiveness, as important as those things are. It is a very important aspect of healthy human life, and of knowing God. The portion I will read raises many of the important questions.
Kenneth Young
NT Wright and the New Perspective on Paul Speaks to Diversity in Christian Higher Education

NT Wright offers a foundation for developing theological that answers questions relevant to the growing diversity now represented in Christian higher education. The current state of research in this area is being approached largely through sociological lenses. This presents problems for the Evangelical Christian community. First it is very difficult for Christians to make a distinction between the secular agenda for diversity and a biblical agenda. The overwhelming tendency in the Evangelical camp is to fear the diversity agenda equating it to the secular multicultural agenda. Consequently, Evangelical Christian organizations tend to stay clear of issues like diversity and race relations.

A second problem correlates with the first. Ignorance of the seriousness of the problems and an under-whelming motivation among Evangelicals to think biblically about the diversity issues are the norm. The fact is that the demographics in the United States are changing. These changes include Evangelical churches and institutions of higher education. In order to remain broadly relevant, the historic traditions in the church as well as fears and associated policies need to be examined and changes made. The changes need to be done without watering down the Christo-centric or biblical-centric emphases that Evangelicals have followed for centuries. However these changes do require that Evangelicals develop a theology that answers the questions people of color and central city urban dwellers are asking. This means that the contributions theologians of color are making need to be admitted into the theological mainstream and into the canon of evangelical theology at rates consistent with the demographic changes. This paper will outline elements of Wright’s work that gives foundation to seminal works that needs to be done in this area.

Faculty/Student Collaboration: The Pluses and the Possibilities

Dr. Kathleen Black  The Characteristics and Values of Undergraduate Research
Prof. Heather Bren  A Philosophy of Artistic Collaboration and Mentoring
Dr. Fengling Margaret Johnson  Co-authoring with Undergraduates
Dr. Matt Hyre  Real-life Application of Faculty/Student Collaboration
Dr. Dale Gentry  Using Grants and Credits for Scientific Undergraduate Collaboration

The keynote session participants will introduce some of the possibilities and benefits of faculty members collaborating with students on research, scholarship, and creative activities. The Council on Undergraduate Research believes that these endeavors make up an essential component of a quality college education. At Northwestern, faculty members are working with students on some exciting and diverse projects, and, in support of this collaboration, our administration is providing funds for even more opportunities. Whether complex or relatively simple, faculty/student collaboration leading to original contribution to a particular discipline deepens and extends the learning beyond the classroom.